

LISTING OF THE CLAIMS

Please amend the claims as shown below. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A system for recording and/or reproducing programs received or programmed to be received, comprising:

program sorting means for sorting said programs into categories according to a predetermined rule;

virtual channel management means for assigning virtual channels to respective categories, and for setting said programs, sorted into said categories, in sequential order on the assigned virtual channels;

program recording means for recording said programs in the respective categories on the assigned virtual channels or programming a recording schedule thereof;

user operation means for accepting user-based channel select operation and/or program search operation on said virtual channels; and

program presentation means for extracting a corresponding program for reproduction from a selected virtual channel in response to user operations accepted through said user operation means,

wherein time base for display of each virtual channel advances when the virtual channels are not displayed, independently and continuously on each virtual channel for the period of time when other virtual channels are selected to give a viewer an impression that virtual channels are indistinguishable from non virtual channels.

2. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein an entry of the categories of said virtual channels is made according to user profiles and/or or user instructions.

3. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channels include a virtual channel for an array of programs, which are not included in any_a category, ~~for the failure to set an associated category by the user.~~

4. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said program sorting means is to sort sorts said programs into categories according to EPG (Electronic Programming Guide) and/or or user instructions.

5. (Previously Presented) A system for recording and/or reproducing programs according to claim 1,

wherein the reproduction start order of the programs on the virtual channels is in conformity with a priority established in accordance with at least one of an on-the-air program order, user profiles and user instructions.

6. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means is to ~~shift~~shifts reproduction start positions on the virtual channels in the process of being selected and non-selected with the lapse of real time.

7. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said user operation means is to ~~accept~~accepts program search operations including pause, fast forward and rewind of reproduction positions on the virtual channels.

8. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said user operation means is to ~~accept~~accepts operations of specifying a program preservative status, inclusively of deletion, preservation and reservation, for ~~later~~subsequent watching, relating to specific programs on the virtual channels.

9. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means is to ~~manage~~manages the preservative status of the programs set in array on the virtual channels, as well.

10. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to identify~~ identifies each program set in array on the virtual channels as one watched by the user or not.

11. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates the programs on the virtual channels according to a specified preservative status with respect to each of the recorded programs.

12. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one watched, in a period of a near past on a time base on the associated virtual channel.

13. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one programmed to be deleted, in a period of a remote past on a time base on the associated virtual channel.

14. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one preserved, in a period of a slightly remote past on a time base on the associated virtual channel.

15. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one programmed to be recorded, in a period of a future, provided that a point on and after a date is required, on a time base on the associated virtual channel.

16. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one remaining recorded without being watched, in a period of a future ~~spare~~ available time on the associated virtual channel.

17. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a program, identified as one in process of reservation, in a period of a future ~~spare~~ available time on the associated virtual channel preferentially.

18. (Canceled)

19. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to display~~ displays scheduling of programs on each virtual channel and a ~~watching~~ viewing status and a preservative status of each program in a form of being ~~readily~~ identified, ~~at a glance~~.

20. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to locate~~ locates a series of programs on a same virtual channel continuously.

21. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means ~~is to shift~~ shifts a reproduction start position on the virtual channel in a process of being selected to a period of a future or a past on a time base in response to fast forward or rewind instructions supplied through said user operation means.

22. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means inhibits permits no fast forward operation for a program corresponding to one earlier than a date.

23. (Currently Amended) A system for recording and/or reproducing programs according to claim 1,

wherein said virtual channel management means is to shift shifts a reproduction start position on the virtual channel in a process of being selected to a period of a future or a past on a time base in response to fast forward or rewind instructions supplied through said user operation means, while setting a reproduction start position on the virtual channel in a process of not being non-selected so as to follow the lapse of real time.

24. (Currently Amended) A system for recording and/or reproducing programs according to claim 1, further comprising

real channel management means for assigning real channels to programs, wherein said program presentation means is to take out removes the recorded program for reproduction from the virtual channel selected through said user operation means in response to the selection of said virtual channel, while presenting the program on the real channel selected through said user operation means in response to the selection of said real channel.

25. (Currently Amended) A system for recording and/or reproducing programs according to claim 24,

wherein said user operation means is to accept accepts a channel select operation requiring no without a distinction between the real channels and the virtual channels.

26. (Previously Presented) A system for recording and/or reproducing programs according to claim 1, further comprising:

management means for managing reproduction information relating to programs paused on each virtual channel.

27. (Previously Presented) A system for recording and/or reproducing programs according to claim 26,

wherein said management means displays a list of paused programs for accepting the user selection on the list, and starts reproduction of the corresponding recorded program in response to the user selection.

28. (Currently Amended) A method of recording and/or reproducing programs received or programmed to be received, comprising:

a program sorting step of sorting the programs into categories according to a predetermined rule;

a virtual channel management step of assigning virtual channels to respective categories, and of setting said programs, sorted into said categories, in sequential order on the assigned virtual channels;

a program recording step of recording the programs in the respective categories on the assigned virtual channels or programming a recording schedule thereof;

a user operation step of accepting a user-based channel select operation and/or a program search operation on the virtual channels; and

a program presentation step of extracting a corresponding program for reproduction from a selected virtual channel in response to the user operation accepted through said user operation step~~[.,.]~~; and

advancing a time base for display of each virtual channel when the virtual channels are not displayed, independently and continuously on each virtual channel for the period of time when other virtual channels are selected to give a viewer an impression that virtual channels are indistinguishable from non-virtual channels.

29. (Previously Presented) A method of recording and/or reproducing programs according to claim 28,

wherein an entry of categories of the virtual channels is made according to user profiles and/or user instructions.

30. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channels include a virtual channel for an array of programs, which are not included in ~~any_a category_~~ ~~for the failure to set an associated category by the user.~~

31. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said program sorting step is to ~~sort~~ sorts the programs according to EPG
(Electronic Programming Guide) and/or or user instructions.

32. (Previously Presented) A method of recording and/or reproducing
programs according to claim 28,

wherein the reproduction start order of the programs on the virtual channels is in
conformity with a priority established in accordance with at least one of program order, user
profiles and user instructions.

33. (Currently Amended) A method of recording and/or reproducing
programs according to claim 28,

wherein said virtual channel management step is to ~~shift~~ shifts reproduction start
positions on the virtual channels in a process of being selected and non-selected in response to
the lapse of real time.

34. (Currently Amended) A method of recording and/or reproducing
programs according to claim 28,

wherein said user operation step is to ~~accept~~ accepts program search operations
including pause, fast forward and rewind of reproduction positions on the virtual channels.

35. (Currently Amended) A method of recording and/or reproducing
programs according to claim 28,

wherein said user operation step is to accept operations of specifying a recorded program preservative status, inclusively of deletion, preservation and reservation, for ~~later watching~~ subsequent viewing, of specific programs on the virtual channels.

36. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to manage a preservative status of programs set in array on the virtual channels.

37. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to identify the programs set in array on the virtual channels as one watched by the user or not.

38. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to locate the programs on the virtual channels in response to a specified preservative status with respect to each of the recorded programs.

39. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~locate~~ locates a program, identified as one watched, in a period of a ~~near~~ recently past on a time base on the associated virtual channel.

40. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~locate~~ locates a program, identified as one programmed to be deleted, in a period of a ~~remote~~ past on the time base on the associated virtual channel.

41. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~locate~~ locates a program, identified as one preserved, in a period of a ~~slightly~~ recently remote past on a time base on the associated virtual channel.

42. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~locate~~ locates a program, identified as one programmed to be recorded, in a period of a future, provided that a point on and after a date is required, on a time base on the associated virtual channel.

43. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to locate-locates a program, identified as one remaining recorded without being watched, in a period of a future ~~spare~~ available time on the associated virtual channel.

44. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to locate-locates a program, identified as one in process of reservation, ~~preferentially~~ in a period of a future ~~spare~~ available time on the associated virtual channel.

45. (Cancelled)

46. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to display-displays scheduling of programs on each virtual channel and a watching status and a preservative status of each program in a form of ~~being~~ readily identified-at a glance.

47. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~locate~~ locates a series of programs on a same virtual channel continuously.

48. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~shift~~ shifts a reproduction start position on the virtual channel in a process of being selected to a period of a future or a past on a time base in response to fast forward or rewind instructions ~~supplied through said user operation means~~.

49. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step permits no inhibits fast forward operation for a program corresponding to one earlier than a schedule date.

50. (Currently Amended) A method of recording and/or reproducing programs according to claim 28,

wherein said virtual channel management step is to ~~shift~~ shifts a reproduction start position on the virtual channel in a process of being selected to a period of a future or a past on a time base in response to fast forward or rewind instructions ~~supplied through said user operation means~~, while setting the reproduction start position on the virtual channel in a process of being non-selected to follow the lapse of real time.

51. (Currently Amended) A method of recording and/or reproducing programs according to claim 28, further comprising:

a real channel management step of assigning real channels to programs, said program presentation step is to take out deletes the recorded program for reproduction from the virtual channel selected ~~through~~ said user operation means in response to a selection of said virtual channel, while presenting the program on the real channel selected ~~through~~ said user operation means in response to the selection of said real channel.

52. (Currently Amended) A method of recording and/or reproducing programs according to claim 51,

wherein said user operation step is to accept accepts a channel select operation without requiring no distinction between the real channels and the virtual channels.

53. (Previously Presented) A method of recording and/or reproducing programs according to claim 28, further comprising:

a management step of managing reproduction information relating to paused programs on each virtual channel.

54. (Previously Presented) A method of recording and/or reproducing programs according to claim 53,

wherein said management step displays a list of paused programs for accepting user selection on said list, and starts the reproduction of the corresponding recorded program in response to the user selection.

55. (New) The apparatus as claimed in claim 1,
wherein time base for display of each virtual channel advances when the
virtual channels are not displayed .

56. (New) The apparatus as claimed in claim 1,
wherein the time advances independently and continuously on each virtual
channel for the period of time when other virtual channels are selected.

57. (New) The method as claimed in claim 28,
wherein the time base for display of each virtual channel advances when the
virtual channels are not displayed .

58. (New) The method as claimed in claim 28,
wherein the time advances independently and continuously on each virtual
channel for the period of time when other virtual channels are selected.